

## Protection to WDXB from Interference By W271AM

The site for the proposed facility is located within the protected contour of second-adjacent channel station WDXB, in Pelham, AL. We predict the WDXB contour at the proposed site to be 63.1 dBu F[50,50]. According to established second-adjacent channel contour Undesired-to-Desired (U/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 103.1 dBu F[50,10].

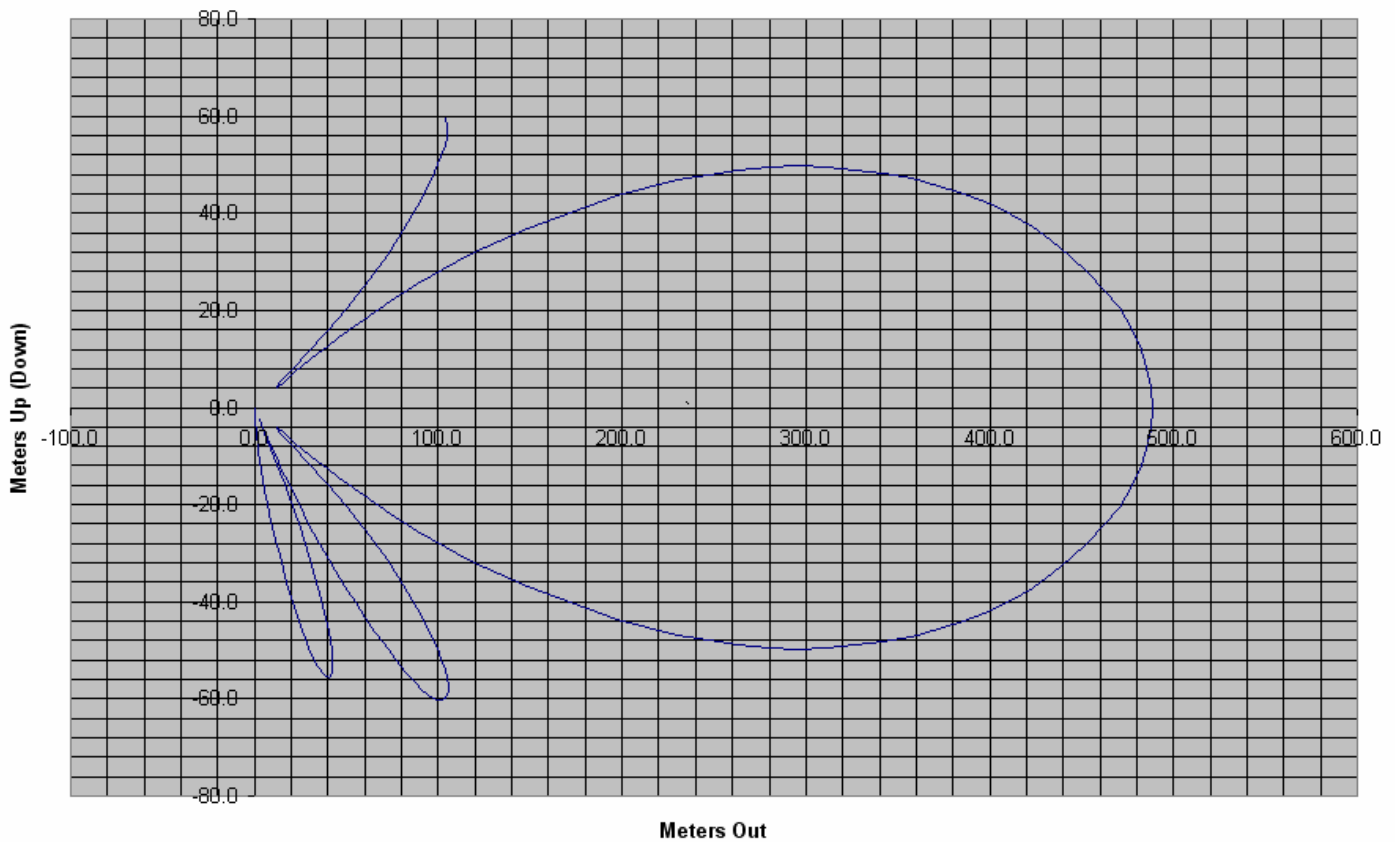
The antenna is proposed to be located with radiation center 147 meters AGL transmitting 0.099 KW ERP. The predicted interfering contour at maximum radiation outward from the antenna RC is a 488.3 meter radius.

Applicant proposes to use a BEXT antenna model TFC2K-4-75WS, which is a four-bay antenna vertically space  $\frac{3}{4}$  wavelength. A graphical representation of radiation in the vertical plane is displayed in **Figure 1**.

Field strength at various elevation angles were provided by the antenna manufacturer and displayed in **Table 1** at the end of this exhibit. Columns with calculated field dB and the contour distance in meters were also calculated both in elevation radial form and for plotting in plane coordinates. It can be seen from this data that the actual interference area does not exceed 59.9 meters below the 147 m AGL center of radiation. Therefore, the actual interference area does not extend below 87 meters AGL. There are no areas or structures 10 m above the tower reference elevation within affected area.

All areas that can be occupied by the public are below the area for potential interference to W271AM. Therefore, the interference area is limited to an area where there are no public places.

TFC2K-4-75WS



**Figure 1**

### **Protection to WBEI from Interference By W271AM**

The site for the proposed facility is located within the protected contour of third-adjacent channel station WBEI, in Reform, AL. Using 3-Second terrain data, we predict the WBEI contour at the proposed site to be 70.55 dBu F[50,50]. According to established second-adjacent channel contour Undesired-to-Desired (U/D) protection ratios, the contour from the interfering station should be 40 dB higher than the protected contour. Therefore the respective interfering contour for this proposed amendment is 110.55 dBu F[50,10].

The predicted interfering contour is located entirely within the interference contour potentially affecting WDXB. Therefore, the interference area for WBEI is also limited to an area where there are no public places.

## **Request for Waiver**

Since this proposal complies with 47CFR74.1204(d) based upon the fact that no actual interference will occur due to no population and no public locations within the areas of interference, we hereby request waiver of 47CFR74.1204(a)(3) for separation between this proposed facility and facilities of WDXB and WBEI.

[Table 1 is contained in the following pages]

**FCC Form 349 Exhibit 13B**  
**Waiver Request 47CFR74.1204**

**Table 1**

TFC2K475.DAT

ELEV ANGLE	FIELD STRENGTH	FIELD DB	ELEV ERP(KW)	ELEV DBK	103.10DBU CNTR(M)	DISTANCE OUT (M)	DISTANCE UP(DOWN)	ELEVATION AMSL (M)
=====	=====	=====	=====	=====	=====	=====	=====	=====
-90	0.000	-73.50	0.0000	-83.54	0.1	0.0	-0.1	266.9
-88	0.000	-75.60	0.0000	-85.64	0.1	0.0	-0.1	266.9
-86	0.000	-77.40	0.0000	-87.44	0.1	0.0	-0.1	266.9
-84	0.001	-59.70	0.0000	-69.74	0.5	0.1	-0.5	266.5
-82	0.003	-51.00	0.0000	-61.04	1.4	0.2	-1.4	265.6
-80	0.006	-44.80	0.0000	-54.84	2.8	0.5	-2.8	264.2
-78	0.010	-40.00	0.0000	-50.04	4.9	1.0	-4.8	262.2
-76	0.016	-36.10	0.0000	-46.14	7.7	1.9	-7.4	259.6
-74	0.023	-32.70	0.0001	-42.74	11.3	3.1	-10.9	256.1
-72	0.032	-29.90	0.0001	-39.94	15.6	4.8	-14.9	252.1
-70	0.043	-27.40	0.0002	-37.44	20.8	7.1	-19.6	247.4
-68	0.054	-25.30	0.0003	-35.34	26.5	9.9	-24.6	242.4
-66	0.068	-23.30	0.0005	-33.34	33.4	13.6	-30.5	236.5
-64	0.082	-21.70	0.0007	-31.74	40.2	17.6	-36.1	230.9
-62	0.098	-20.20	0.0009	-30.24	47.7	22.4	-42.1	224.9
-60	0.112	-19.00	0.0012	-29.04	54.8	27.4	-47.4	219.6
-58	0.124	-18.10	0.0015	-28.14	60.8	32.2	-51.5	215.5
-56	0.135	-17.40	0.0018	-27.44	65.9	36.8	-54.6	212.4
-54	0.141	-17.00	0.0020	-27.04	69.0	40.5	-55.8	211.2
-52	0.141	-17.00	0.0020	-27.04	69.0	42.5	-54.4	212.6
-50	0.133	-17.50	0.0018	-27.54	65.1	41.9	-49.9	217.1
-48	0.116	-18.70	0.0013	-28.74	56.7	38.0	-42.1	224.9
-46	0.089	-21.00	0.0008	-31.04	43.5	30.2	-31.3	235.7
-44	0.052	-25.60	0.0003	-35.64	25.6	18.4	-17.8	249.2
-42	0.007	-43.20	0.0000	-53.24	3.4	2.5	-2.3	264.7
-40	0.045	-27.00	0.0002	-37.04	21.8	16.7	-14.0	253.0
-38	0.099	-20.10	0.0010	-30.14	48.3	38.0	-29.7	237.3
-36	0.151	-16.40	0.0023	-26.44	73.9	59.8	-43.4	223.6
-34	0.195	-14.20	0.0038	-24.24	95.2	78.9	-53.2	213.8
-32	0.229	-12.80	0.0052	-22.84	111.9	94.9	-59.3	207.7
-30	0.245	-12.20	0.0060	-22.24	119.9	103.8	-59.9	207.1
-28	0.243	-12.30	0.0058	-22.34	118.5	104.6	-55.6	211.4
-26	0.219	-13.20	0.0047	-23.24	106.8	96.0	-46.8	220.2
-24	0.176	-15.10	0.0031	-25.14	85.8	78.4	-34.9	232.1
-22	0.111	-19.10	0.0012	-29.14	54.2	50.2	-20.3	246.7
-20	0.027	-31.40	0.0001	-41.44	13.1	12.4	-4.5	262.5
-18	0.074	-22.60	0.0005	-32.64	36.2	34.4	-11.2	255.8
-16	0.188	-14.50	0.0035	-24.54	92.0	88.4	-25.4	241.6
-14	0.313	-10.10	0.0097	-20.14	152.7	148.1	-36.9	230.1
-12	0.447	-7.00	0.0198	-17.04	218.1	213.4	-45.4	221.6
-10	0.582	-4.70	0.0335	-14.74	284.3	279.9	-49.4	217.6
-8	0.708	-3.00	0.0496	-13.04	345.7	342.3	-48.1	218.9
-6	0.822	-1.70	0.0669	-11.74	401.5	399.3	-42.0	225.0
-4	0.912	-0.80	0.0823	-10.84	445.3	444.3	-31.1	235.9
-2	0.977	-0.20	0.0945	-10.24	477.2	476.9	-16.7	250.3

**FCC Form 349 Exhibit 13B  
Waiver Request 47CFR74.1204**

0	1.000	0.00	0.0990	-10.04	488.3	488.3	0.0	267.0
2	0.977	-0.20	0.0945	-10.24	477.2	476.9	16.7	283.7
4	0.912	-0.80	0.0823	-10.84	445.3	444.3	31.1	298.1
6	0.822	-1.70	0.0669	-11.74	401.5	399.3	42.0	309.0
8	0.708	-3.00	0.0496	-13.04	345.7	342.3	48.1	315.1
10	0.582	-4.70	0.0335	-14.74	284.3	279.9	49.4	316.4
12	0.447	-7.00	0.0198	-17.04	218.1	213.4	45.4	312.4
14	0.313	-10.10	0.0097	-20.14	152.7	148.1	36.9	303.9
16	0.188	-14.50	0.0035	-24.54	92.0	88.4	25.4	292.4
18	0.074	-22.60	0.0005	-32.64	36.2	34.4	11.2	278.2
20	0.027	-31.40	0.0001	-41.44	13.1	12.4	4.5	271.5
22	0.111	-19.10	0.0012	-29.14	54.2	50.2	20.3	287.3
24	0.176	-15.10	0.0031	-25.14	85.8	78.4	34.9	301.9
26	0.219	-13.20	0.0047	-23.24	106.8	96.0	46.8	313.8
28	0.243	-12.30	0.0058	-22.34	118.5	104.6	55.6	322.6
30	0.245	-12.20	0.0060	-22.24	119.9	103.8	59.9	326.9
TFC2K475.DAT					MAX:	488.3m	-59.9m	207.1m

**End of Table 1**